SECTION 1. PROJECT INFORMATION

1.1. Project Title: EA-08-17: West Dunne Ave – City of Morgan Hill

1.2. Lead Agency Contact

Steve Golden
Planning Division, Community Development Department
City of Morgan Hill
17575 Peak Ave
Morgan Hill, CA 95037

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1.3. Project Location

The project location is along the existing and proposed public right-of-way of West Dunne Ave between Monterey Rd and Peak Ave. Figure 1 shows a vicinity map of the project location.

1.4. Project Proponent

City of Morgan Hill
Public Works Dept
17575 Peak Ave
Morgan Hill, CA 95037

1.5. Owner (Public Right-of-Way)

City of Morgan Hill
17555 Peak Ave
Morgan Hill, CA 95037

1.6. General Plan Designation: Not Applicable

1.7. Zoning: Not Applicable

SECTION 2. PROJECT DESCRIPTION

The project proponent, the City of Morgan Hill, proposes improvements to West Dunne Avenue right-of-way between Monterey Rd and Peak Ave (approximately 2,650ft in length) to improve safety and create a multi-modal roadway. The existing right-of-way includes one lane in each direction with varying pavement widths and the partial existence of curb and gutter varying on a property by property basis. The proposed project will expand the roadway width for a paved width of approximately 50-65 feet. The widths of improvements vary on a property by property basis.

The proposed improvements include the following along the roadway in various intensities and locations: roadway widening and striping; pedestrian access with sidewalks on both sides of the road including curb and gutter; a two way left turn lane; bike lanes in both directions; streetlights; storm drainage; signage; landscaping; relocation of utilities; and undergrounding of a substantial amount of overhead electric utilities. The improvements also include some re-grading where elevation changes along the roadway will be modified to improve visibility and where retaining walls will be installed to improve the slope stability and integrity of areas adjacent to the roadway.

In addition to the above described roadway improvements project, this initial study can also be used for property acquisition activities associated with the project, as well as possible regulatory or code compliance approvals that may be required as a consequence of the proposed project. These include the reduction of front yard setback requirement for certain properties along West Dunne Avenue. This initial study identifies the potential environmental impacts and those standard measures or mitigation that avoids, minimizes, or mitigates the potential impacts to less than significant levels.

2.1. Recommended Roadway Improvement Changes

In the current 2001 City of Morgan Hill General Plan Circulation Element, West Dunne Ave is identified as a future 4-lane arterial from the Santa Teresa Corridor to Gallop Drive. While the currently proposed roadway improvement project does not propose to construct the roadway to a full 4-lane arterial standard, it does not preclude further future improvements to achieving the current Circulation Element arterial roadway standard.

The City of Morgan Hill has recently completed a new traffic demand model which replaces an existing model based on a structure which was not sensitive enough to make it a viable planning tool for local land use and network changes. The new traffic demand model updates model inputs such as land use, road network and trip generation parameters, and validates the model to current (2007) conditions. The Morgan Hill traffic demand model is being used to update the Circulation Element and to analyze proposed amendments to the City's General Plan and to generate traffic volume forecasts and other travel demand data. Based on the analysis of the future roadway network and forecasting, a recommended model network has been proposed for roadway improvement changes to the current Circulation Element. The analysis has determined that Dunne Avenue between Hale Avenue/Santa Teresa Boulevard and Del Monte Avenue

would be reduced from a 4-lane arterial in the 2001 General Plan to a 2-lane arterial with a two-way-left-turn lane. This recommended change has been incorporated into the proposed General Plan Circulation Element Amendment, which is being evaluated in a draft Environmental Impact Report that is currently in circulation for a 45-day public comment period. Decisions about the future planned width for Dunne Avenue will be made under the Circulation Element Amendment process.

2.2. Site Description

The proposed site includes approximately 2,650 linear feet of existing and proposed public right-of-way of West Dunne Ave. Depending on the location, the existing right-of-way of West Dunne Ave is approximately 65-78ft in width and currently accommodates one lane in each direction with a two-way left turn lane between Del Monte Ave and Monterey Rd. The roadway generally slopes down from Peak Ave towards Monterey Rd (overall elevation change of approximately 35ft). Figure 2 shows an aerial photo of the subject property (April 2006). Portions of the roadway have improved shoulder areas (curb, gutter, and sidewalk), however, a large extent of the north shoulder is unimproved and most of the roadway west of Barnell Ave has unimproved shoulders.

2.3. Surrounding Land Uses and Setting

The adjacent land uses surrounding W. Dunne Ave where the project is proposed are primarily residential and vacant land on both the north and south sides of the roadway. Some commercial development adjacent to West Dunne Ave exists, but only on the south side. The table below identifies the current General Plan Land Use and Zoning Designations of the adjacent areas:

Table 1. General Plan and Zoning Designations adjacent to project area (W. Dunne Ave)

Adjacency to Dunne	Designation	Peak Ave to Del Monte Ave	Del Monte Ave to Monterey Rd
North	Zoning	R1-20,000; R2-3,500; R2 RPD; R3(c)	R2-3,500; CC-R
	General Plan	Multi-Family Medium; Multi-Family Low	Multi-Family Low; Mixed Use
South	Zoning	R2-3,500; CO; R2-3,500 RPD; R3; RPD	PUD
	General Plan	Multi-Family Low; Multi-Family Medium	Commercial

SECTION 3. EVALUATION OF ENVIRONMENTAL IMPACTS

This section describes the existing environmental conditions on and near the project site, as well as environmental impacts associated with the proposed project. The environmental checklist, as recommended in the California Environmental Quality Act (CEQA) Guidelines, was used to identify environmental impacts that could occur if the proposed project is implemented.

Mitigation measures are identified for all significant project impacts. "Mitigation Measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guideline 15370). Measures that are required by law or are City standard requirements are categorized as "Standard Measures."

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Less Than Significant with Mitigation Incorporation" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources		Geology / Soils
	Hazards & Hazardous Materials		Hydrology / Water Quality		Land Use / Planning
	Mineral Resources	X	Noise		Population / Housing
	Public Services		Recreation		Transportation / Traffic
	Utilities / Service Systems	X	Mandatory Findings of Significance		

3.1. Aesthetics

Would the project have:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing	☐	☐	☒	☐

visual character or quality of the site and its surroundings?

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ☐ ☐ ☒ ☐

3.1.1. Discussion

The proposed project includes improvements to an existing 2-lane roadway. Minor re-grading along the extent of the roadway to reduce slope and elevation changes will be completed as a component of the safety improvements to increase driver visibility and pedestrian safety.

The roadway will also be somewhat widened to accommodate turn lanes, sidewalks and pedestrian improvements, and bike lanes. Cuts into slope areas adjacent to the roadway will require some short (1-3 ft retaining walls) to retain slope stability. Along the north side (approximately 650 ft east of Peak Ave, a 50 linear section will require up to a 9 ft retaining wall. The proposed wall does not reduce visibility of any scenic areas as it will be constructed in the side of an existing steeply sloped area to retain slope stability.

One of the improvements proposed is the addition and replacement of street lights. The proposed street light plan will provide for a total of 21 lights. Nine street lights currently exist, however, most of these lights will be replaced or relocated. Street lights will be installed approximately every 100 to 150 ft and will be staggered on either side of the street per Public Works Department standards. The lights are planned to be 150 watt high pressure sodium type. New and replacement fixtures will be shielded to provide the necessary light for vehicle and public safety within the roadway corridor, but will minimize light illumination outside of the roadway corridor and light pollution to the sky. While additional street light fixtures are proposed, current street light fixtures along West Dunne Ave are not shielded so the overall impact to the area will be minimized. The additional street lights are not considered to create substantial new light or glare impacts to the surrounding area.

The existing roadway is a combination of various roadway improvements including: monolithic curb/gutter and sidewalk; detached sidewalks separated by planting strips; and unimproved shoulders. The designs and improvements have evolved over time with various standards as segments of the roadway have been improved with adjacent development. However, the majority of the roadway (primarily between Barnell Ave and Peak Ave) is not improved or consistent with the City's typical arterial roadway standards. The surrounding land uses along West Dunne transition from commercial/urban (Monterey Rd) to residential (Peak Ave). However, because of the lack of street improvements and unimproved shoulders, the streetscape has a more rural feeling, which is not in character with the surrounding land uses and development.

The project proposes to install improvements such as sidewalks and bikes lanes, which will likely have a beneficial impact to the visual quality of the streetscape environment. A roadway with these types of improvements is also more characteristic of other arterial and collector streets in the surrounding area and within Morgan Hill. Another component of the project will be the undergrounding of utilities. This is not only a safety improvement, but also improves the aesthetics of the proposed roadway improvements by removing utility poles and overhead utilities that can make the roadway look cluttered and unappealing. This should also provide a visual benefit to those residences that are directly adjacent to the roadway as the utilities are currently in property owner's front yards and able to be viewed from inside the residences will no longer be visible.

The project proposes to remove 64 trees as part of the improvement plans. A more detailed discussion of the removal of trees is provided in Section 3.4, Biological Resources. The trees proposed for removal are of various types, ages, and proximities from the current roadway. Some of the trees were likely part of landscaping plans and purposely planted while others naturally grew and may be a result of trees that existed before the current road was expanded (i.e. not part of a tree planting plan). In consequence, although some trees provide for interesting roadway features, they do not uniformly define the streetscape environment and provide for a cohesive streetscape design.

Standard Measure

As part of the final roadway improvement plans, the project will need to obtain a Tree Removal Permit as required of the Morgan Hill Municipal Code (Chapter 12.32). As part of the process, the Public Works Department shall submit a proposed tree plan to the Community Development Department for review and approval which satisfactorily demonstrates that the removal of the trees are necessary, will provide for a sufficient number of replacement trees (native trees removed shall be replaced with native trees, unless practical reasons preclude this) and will take into account current and potential future development, proximity to existing and proposed improvements, and types, sizes, and varieties of trees to provide for a visual stimulating and viable streetscape, appropriate to its land use context.

3.1.1. Conclusion

Due to standard measures that will be incorporated into the project, the proposed project would not result in a significant, adverse, visual or aesthetic impacts. (Less than significant impacts)

3.2. Agriculture Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

3.2.1. Conclusion

The proposed project would not result in a significant impact to agricultural resources. (No Impact)

3.3. Air Quality

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable				

net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

3.3.1. Discussion

Air quality is regulated through standards set by the Federal Clean Air Act. Pursuant to this Act, the United States Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for outdoor air pollutants which are considered safe for public health. The criteria pollutants include:

- Carbon Monoxide
- Ozone
- Nitrogen dioxide
- Sulfur Dioxide
- Particulate Matter (PM10)
- Lead

In California, air quality is overseen by the California Air Resources Board (CARB). In addition to NAAQS, California has established the California Ambient Air Quality Standards. These standards are generally more stringent than the NAAQS and also include hydrogen sulfide, vinyl chloride, and visibility reducing particles. After State standards are established, State law requires the ARB to designate areas as attainment, nonattainment, nonattainment-transitional, or unclassified for each State standard. The size of the area is determined by the pollutant, the location of contributing emission sources, meteorology, topographic features, and political boundaries. Air basins are the area designated for ozone, nitrogen dioxide, PM10, sulfates, and visibility reducing particles. Counties (or the portion of a county located within an air basin) are the areas designated for carbon monoxide, sulfur dioxide, lead, and hydrogen sulfide.

Area Designations

Unclassified: a pollutant is designated unclassified if the data are incompete and do not support a designation of attainment or nonattainment.

Attainment: a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a three-year period.

Nonattainment: a pollutant is designated nonattainment if there was at least one violation of a State standard for that pollutant in the area.

Nonattainment/Transitional: is a subcategory of the nonattainment designation. An area is designated nonattainment / transitional to signify that the area is close to attaining the standard for that pollutant.

The project site is within the San Francisco Bay Area Air Basin (SFBAAB), which is overseen by the Bay Area Air Quality Management District (BAAQMD). BAAQMD is the regional agency primarily responsible for assuring that the NAAQS and CAAQS are attained and maintained within the air basin.

Three pollutants (ozone, PM10, and PM2.5) are known to exceed the state or federal standards in the SFBAAB and is considered non-attainment zones for these pollutants. The U.S. Environmental Protection Agency (EPA) has also recently designated the SFBAAB as nonattainment for the new 24-hour fine particulate (PM2.5). However, the designation will not be effective until after publication of the regulation in the Federal Register.

Mobile sources, including on-road motor vehicles such as automobiles, trucks and buses are the largest contributor or ozone precursors in the Bay Area. Transportation projects can have an effect on air quality if vehicle emissions are greater with the project than without. However, while this project proposes improvements to an existing roadway, the project itself does not create additional vehicle trips or vehicle miles traveled, therefore it is not considered to have significant impacts to air quality. This project will likely have some beneficial impacts to air quality as a result of creating safer, more direct routes for pedestrians and bicyclists which could reduce vehicle trips and provide for congestion reduction. The project will also likely reduce some congestion due to new lane configurations which will likely reduce or eliminate the wait time for turning vehicles.

3.3.2. Short Term Air Quality Impacts

Construction of the proposed project could result in short-term air quality impacts. Construction-related air quality impacts are typically the result of dust creating activities, exhaust emissions of construction equipment, and the standard use of construction materials such as solvents, paints and other construction materials that tend to volatilize into the atmosphere. Construction equipment emits carbon monoxide and ozone precursors. However, these emissions are included in the emission inventory that is the basis for regional air quality plans, and are not expected to impede attainment or maintenance of ozone and carbon monoxide standards in the Bay Area (BAAQMD CEQA Guidelines 1999). Due to the negligible amount and short duration, the exhaust emissions of construction equipment and use of volatile construction materials would not result in a significant air quality impact.

Construction activities such as excavation and grading operations and construction vehicles driving over and wind blowing over exposed earth, generate fugitive particulate matter that can affect local and regional air quality. The effects of these dust generating activities will be increased dustfall and locally elevated levels of particulate matter downwind of the construction activity. Construction dust has the potential for creating a nuisance at nearby properties. If uncontrolled, dust generated by construction activities could be a significant impact.

The following standard dust control measures will reduce potential construction related air quality impacts for particulate matter to less than significant levels:

Standard Measure 1
In accordance with the City of Morgan Hill Standards, prior to the "Notice to Proceed" from the Public Works Director, the contractor shall submit to the Public Works Director for approval, a management plan detailing strategies for dust control during construction of the project. The intent of this condition is to minimize construction related disturbance of residents of the nearby or adjacent properties.

Mitigation Measure (AIR-1)
The proposed project shall include the following mitigation measure to reduce short term air quality impacts due to construction to less than a significant level:

The Bay Area Air Quality Management District (BAAQMD) has prepared a list of feasible construction dust control measures that can reduce construction impacts to less than significant level. The following construction practices shall be implemented during construction of the proposed project:

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, or other loose materials or require all trucks to maintain at least two feet of freeboard.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
- Install sandbags or other erosion control measure to prevent silt runoff to public roadways.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.

3.3.3. Conclusion

The proposed project would not result in a significant impact to air quality. (Less Than Significant with Mitigation Incorporation)

3.4. Biological Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

3.4.1. Land Cover and Habitat

The project site is an existing roadway and is surrounded primarily by urban/suburban development. The land cover that is not currently improved consists of non-native grassland, bare ground, and contains native and non-native trees. The habitat provided by the project site has minimal capacity to support sensitive biological resources because it is low quality and its adjacency to surrounding urban landuses that do not have characteristics to support long-term sustainable populations of sensitive biological resources.

3.4.2. Impacts to Trees

Significant trees are defined by "Restriction on Removal of Significant Trees" (Morgan Hill Municipal Code 12.32) for residential properties as indigenous trees 18-inches or more in circumference or trees of any size within the public right of way. A tree removal permit from the City of Morgan Hill or approval to remove trees as part of an approved development plan is required for the removal of significant trees.

A tree survey and report by Hort Science (2009) was completed to identify all trees within 20ft beyond the limits of the proposed sidewalk to account for trees that might be impacted by demolition and construction ("development area"). The complete tree survey is provided in *Appendix B*. Within the development area, the tree survey identified 106 trees, representing 35 different species (various indigenous and non-indigenous species). The arborist reviewed the project plans, the spatial relationship of the proposed construction to the existing trees, and the tree health to determine the impacts to existing trees. Based on the current project plans and tree survey a total of 64 trees will be removed. Of these, 49 trees are considered "significant trees", but only 14 of them are indigenous trees to Morgan Hill (35 trees are within the public right of way which are considered significant trees, but are not indigenous trees). In addition to the assessment of trees to be removed, the Arborist is recommending Tree Preservation Guidelines and design recommendations to minimize and mitigate impacts to remaining trees and to increase tree survival and maintenance of tree health.

Standard Measure

The City of Morgan Hill's Restriction on Removal of Significant Trees ordinance (Municipal Code 12.32) allows significant trees to be removed if one of several findings are made. As part of the final roadway improvement plans, the project will need to obtain a Tree Removal Permit as required of the Morgan Hill Municipal Code. As part of the process, the Public Works Department shall submit a proposed tree plan to the Community Development Department for review and approval which satisfactorily demonstrates that the removal of the trees are necessary, will provide for a sufficient number of replacement trees (native trees removed shall be replaced with native trees, unless practical reasons preclude this) and will take into account current and potential future development, proximity to existing and proposed improvements, and types, sizes, and varieties of trees to provide for a visual stimulating and viable streetscape, appropriate to its land use context.

3.4.3. Mitigation Measure for Impacts to Trees

Based on the arborist tree survey and report (Hort Science 2009) a number of recommendations were established for the design of the project and for the protection and preservation of trees during construction. The following mitigations shall be included and/or incorporated on all construction plans.

Tree Protection Mitigation Measures

Design Standards

1. A Tree Protection Zone shall be established for trees to be preserved. No grading, excavation, construction or storage of materials shall occur within that zone. The Tree Protection Zones shall be defined as follows: **(BIO-1.1)**

    i) For trees #435, 437, 448 and 475 the Tree Protection Zone shall be established at approximately 2' to the south (at the limit of the proposed grading), and at the dripline in all other directions.
    ii) For trees #538 and 539 the Tree Protection Zone shall be established at the approximately 1' to the south (at the limit of the proposed grading), at the edge of the existing curb to the north and at the dripline to the east and west.
    iii) For trees #507-508, 517 and 530, the Tree Protection Zone shall be established at approximately 5' to the north (at the limit of the proposed grading) and at the dripline in all other directions.
    iv) For trees #507-508, 517 and 530, the Tree Protection Zone shall be established at approximately 5' to the north (at the limit of the proposed grading) and at the dripline in all other directions.
    v) For trees #434, 436, 455, 456, 467, 470, 473 and 472, the Tree Protection Zone shall be established at approximately 5' to the south (at the limit of the proposed grading) and at the dripline in all other directions.
    vi) For trees #434, 443, 461, 462 and 471, the Tree Protection Zone shall be established at approximately 10' to the south (at the limit of the proposed grading) and at the dripline in all other directions.
    vii) For trees #457 and 460, the Tree Protection Zone shall be established at approximately 15' to the south (at the limit of the proposed grading) and at the dripline in all other directions.
    viii) For all other trees, the Tree Protection Zone shall be established at the dripline.

2. Select temporary spoil storage areas to be as far from trees as possible. **(BIO-1.2)**

3. No underground services including utilities, sub-drains or sewer shall be placed within the Tree Protection Zone. **(BIO-1.3)**

4. Tree Preservation Notes should be included on all plans. **(BIO-1.4)**

5. Any herbicides placed under paving materials must be safe for use around trees and

labeled for that use. **(BIO-1.5)**

6. No trenching either for irrigation or planting shall occur within the Tree Protection Zone. **(BIO-1.6)**

Pre-construction treatments (**BIO-2)**

1. Prior to the start of demolition, the Consulting Arborist shall meet with the contractors to review the location of tree protection fencing and work procedures. **(BIO-2.1)**

2. Fence or protect with hay bales all trees to completely enclose the Tree Protection Zone prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or orange plastic supported by posts driven into the ground. Fencing shall be placed at the edge of the Tree Protection Zone. Fences are to remain until construction is completed. **(BIO-2.2)**

3. Prior to starting any demolition or construction, have all trees to be preserved with portions of their crowns over the construction area pruned to provide clearance for construction equipment. All pruning shall be completed under the supervision of a Certified Arborist or Tree Worker and adhere to the Tree Pruning Guidelines of the International Society of Arboriculture. Tree pruning contractor must hold the C-61/D49 contractor's license. **(BIO-2.3)**

Protection during construction **(BIO-3)**

1. No grading, construction, demolition or other work shall occur within the Tree Protection Zone. Any modifications must be approved and monitored by the Consulting Arborist. **(BIO-3.1)**

2. Excavation within the driplines of trees #435, 437, 448 460, 470, 471, 538 and 539 shall be performed by hand, or using compressed air or water to expose roots 2" and larger in diameter. Prune all roots 2" in diameter and larger clean and square just beyond the limit of the excavation. Root pruning can be performed using a saw, a vibrating knife, rock saw, or other approved root pruning equipment. The Consulting Arborist shall be present for all root pruning. **(BIO-3.2)**

3. For all trees, but especially for #434-437, 448, 456, 470, 472, 506-508 and 538 and 539, careful excavation and root pruning shall be employed. Have the equipment operator work slowly and carefully through the top 3' of soil (below pavement). If they feel resistance, they need to stop excavating and inspect for roots 2" and larger in diameter. Expose all roots 2" in diameter and larger by hand to just beyond the limit of the excavation and prune clean and square. Root pruning can be performed using a saw, a vibrating knife, rock saw, or other approved root pruning equipment. The Consulting Arborist shall be present for all root pruning. **(BIO-3.3)**

4. If injury to the tree should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be

applied. **(BIO-3.4)**

5. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the Tree Protection Zone. **(BIO-3.5)**

6. Any additional tree pruning needed for clearance during construction must be performed under the supervision of a Certified Arborist and not by construction personnel. **(BIO-3.6)**

A tree maintenance plan should be adopted as part of the project. Following completion of the project, the City of Morgan Hill should monitor tree health and stability. Application of treatments such as pruning, irrigation, mulch, pest management and fertilization may be required as part of a maintenance program. **(BIO-3.7)**

3.4.4. Impacts to Nesting Raptors

The habitat of the project area that is not currently developed consists of non-native grassland, bare ground, and contains native and non-native trees. The habitat provided by the project site has minimal capacity to support sensitive bird species, however, if present on-site could be impacted due to the removal of trees.

Federal Laws and Regulations Protecting Migratory and Nesting Birds

The federal Migratory Bird Treaty (MBTA; 16 U.SC., Section 703, Supplement I, 1989) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The trustee agency that addresses issues related to the MBTA is the U.S. Fish and Wildlife Service (USFWS). Migratory birds protected under this law include all native birds and certain game birds (e.g., turkeys and pheasants). This act encompasses whole birds, parts of birds, and bird nests and eggs. The MBTA protects active nests (i.e., contains eggs or fledglings) from destruction and all nests of species protected by the MBTA. All native bird species occurring in the City of Morgan Hill are protected by the MBTA.

California Fish and Game Code

All native bird species that occur on the project site are protected by the Fish and Game Code. The California Fish and Game Code protects native birds, including their nests and eggs, from all forms of take, which includes disturbance that causes nest abandonment and/or loss of the reproductive effort. Raptors (i.e., eagles, hawks, falcons, and owls) and their nests are specifically protected in California under Fish and Game Code section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order of Falconiformes or Stringiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided in this code or regulation adopted pursuant thereto." Future development on the project site may be required to include measures to avoid impacts to nesting birds.

3.4.5. Mitigation Measures to Avoid Impacts to Nesting Raptors

Implementation of the following mitigation measures at the time of future development will reduce impacts to nesting raptors to a less than significant level. These measures should be part of the construction plans. **(BIO-4)**

1. Construction should be scheduled to avoid the nesting season to the extent feasible. The nesting season for most raptors in the South San Francisco Bay area extends from January through August. Therefore, if construction can be scheduled to occur between September and December, the nesting season would be avoided, and no impacts would be expected. If it is not possible to schedule construction outside of the breeding season, then the following mitigation measure should be implemented. **(BIO-4.1)**

2. Pre-construction surveys for nesting raptors should be completed by a qualified ornithologist or wildlife biologist to ensure that no nests would be disturbed during project construction. This survey should be completed no more than 14 days prior to the initiation of construction activities during the early part of the breeding season (January through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, a qualified biologist should inspect all trees on and immediately adjacent to the impact areas for nests. If an active nest is found close enough to the construction area to be disturbed by these activities (250 feet), the ornithologist, in consultation with CDFG, should determine the extent of a construction-free buffer zone to be established around the nest. **(BIO-4.2)**

3. Trees on the project site should be removed during the non-nesting season after pre-construction surveys are completed to ensure that nesting raptors and/or their nests would not be adversely affected as a result of the project. **(BIO-4.3)**

3.4.4. City of Morgan Hill Burrowing Owl Habitat Mitigation Program

In conformance with the City's Burrowing Owl Habitat Mitigation Plan, future development on the project site will be required to implement the following measures to avoid direct impacts to burrowing owls and to offset impacts to non-native grassland habitat. Implementation of these standard measures would avoid or reduce significant impacts to burrowing owls and their habitat.

Standard Measures

1. Complete pre-construction surveys to determine if burrowing owls are present within the footprint of the proposed grading area, no more than 30 days prior to initiation of any construction-related activities.

2. Should burrowing owls be found on the site during breeding season (February 1 through August 31), exclusion zones with a 250-foot radius from occupied burrows, shall be established. All project-related activities shall occur outside the exclusion area

until the young have fledged.

3. If preconstruction surveys are completed during the non-breeding season and burrowing owls are observed on the site, the owls may be relocated upon approval of the California Department of Fish and Game once mitigation has been provided.

4. A final report on burrowing owls, including any protection measures, shall be submitted to the Director of Community Development prior to grading.

3.4.5. Conclusion

The proposed project would not result in a significant impact to biological resources. (Less Than Significant with Mitigation Incorporation)

3.5. Cultural Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

3.5.1. Historic Resource Evaluations

The proposed project will expand the existing roadway width to approximately 50-65 ft depending on the extent of roadway. Land uses directly adjacent to the roadway consist of mainly residential development and some commercial. The age of those structures vary widely as Morgan Hill has evolved from a rural based community to one of more suburban/urban development.

In *2008, CIRCA: Historic Property Development* conducted the Morgan Hill Citywide Historical Resources Survey and Inventory (Citywide Survey). The Citywide Survey was conducted to identify historic resources that could be considered potentially significant. The results of the survey included identification of those historic resources that warranted further evaluation and the completion of a portion of the evaluations. This survey was used as an initial review for potentially historic resources in the subject area that may be impacted from construction of the roadway improvements.

CIRCA (July 2009) conducted a reconnaissance survey to further evaluate the 19 properties that were previously identified as potential historic resources and thoroughly assess the surrounding areas of the proposed project. This survey identified two additional resources that were not identified as part of the Citywide Survey. A residence at 155 West Dunne Ave and a former residential site with remaining site features (17090 Peak Ave; area located north of West Dunne Ave near the Peak Ave) were considered for further evaluation because of their appearance and age (over 45 years old). Based on these evaluations, none were found to meet the criteria for listing on the National Register of Historic Places (see CIRCA July 2009 report in *Appendix C* for criteria). Four properties were evaluated under the criteria of the California Register of Historical Resources as follows:

Table 2. Properties evaluated under the CA Register of Historical Resources criteria

Address	Status Codes	DPR Form
17090 Peak Ave	6L	Y
155 W. Dunne Ave	3CS	Y
65 W. Dunne Ave	5S3	Y
45 W. Dunne Ave	5S3	Y

Status Code Definitions:

6L: Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning

5S3: Appears to be individually eligible for local listing or designation through survey evaluation

3CS: Appears eligible for California Register as an individual property through survey evaluation

The properties have been documented using the California Office of Historic Preservation's Primary Record and Building, Structure, and Object forms. These complete documented evaluations can be found in the appendix and have complete recordation of the characteristics of the properties that provide the basis for historic resource significance.

3.5.2. 155 West Dunne Ave: Potential Impacts and Mitigation Measures

Two stone pillars flank the driveway entrance at 155 West Dunne Avenue, one topped by a concrete bell and one an anvil; the pillars are labeled with stone signs carved with "Pray" and "Work", respectively. The property, stone pillars and low rock retaining walls are considered to meet the criteria under the California Register of Historical Resources (CRHR) at the local level (California Historical Resource Status Code: 3CS). See Appendix A for DPR 523 forms

of the CIRCA report (July 2009) for complete property characteristics and evaluation.

Potential Impacts to 155 West Dunne Ave due to vibration
The plans for proposed demolition and subsequent new roadway construction propose to avoid direct impacts to the pillars and low rock retaining walls, however, construction activities could unintentionally damage or alter the stone pillars and low rock retaining walls that are in close proximity to proposed work. They could be damaged due to vibration from equipment, such as jackhammers, bulldozers and other construction equipment, created by heavy construction methodologies. This could be caused both from the vibration itself and from the duration of such vibration.

Mitigation Measures to reduce potential vibration impacts to 155 West Dunne Ave

The following mitigation measures will reduce vibration impacts to the sensitive structures (stone pillars and low rock retaining walls) to a less than significant level:

1. Identify feasible alternatives to the use of heavy construction equipment for demolition and construction within 25 feet of the pillars and retaining walls such as saw cut and removal of concrete (instead of jack-hammering) and slurry fill (for backfill material to eliminate/reduce required compaction for regular backfill material). **(CUL-1.1)**

2. Field monitor vibration levels while ground-disturbing construction is occurring within 25 feet of the pillars and retaining walls. Establish a vibration threshold of 0.2 in/sec. If levels of vibration exceed the threshold, alternative construction methods identified in Mitigation #1 would need to be implemented within a 25-foot distance of the pillars and retaining walls or minimum distance determined in the field to reduce vibration levels under the established threshold. **(CUL-1.2)**

3. Document, through photography and field notes, the stone pillars and retaining walls for their preconstruction and post construction conditions. Should damage occur, the stone pillars and retaining walls should be remediated to their preconstruction condition as feasible, while protecting the integrity and long-term sustainability of the structures. **(CUL-1.3)**

Potential impacts to 155 West Dunne Ave due to movement and construction
The proposed demolition and subsequent new roadway construction could unintentionally damage or alter those property characteristics that are in close proximity to proposed work. This includes the character defining features of the residences as well as site elements such as mature trees and plantings, paths and walkways. They could be damaged due to movement of construction equipment, such as backing into the resources.

Mitigation Measures to reduce potential movement and construction impacts to 155 West Dunne Ave

The following mitigation measures will minimize and avoid construction impacts due to the movement of construction equipment impacting the sensitive structures (stone pillars and low

rock retaining walls) to less than significant levels:

1. Prior to the start of construction, contractor will create a "sensitivity zone" by installing temporary protection boundary (i.e. orange fencing; flagging; or signs/notices), around the pillars and retaining walls and control heavy construction equipment while working inside this zone. **(CUL-2.1)**

2. Prior to construction and after construction is completed, document, through photography and field notes, the stone pillars and retaining walls for their preconstruction and post construction conditions. Should damage occur the stone pillars and retaining walls should be remediated to their preconstruction condition as feasible, while protecting the integrity and long-term sustainability of the structures. **(CUL-2.2)**

3.5.3. 45 and 65 West Dunne Ave: Potential Impacts and Mitigation Measures

45 West Dunne Avenue is a two-story, wood frame residence with a rectangular plan. The property is in good condition and features mature trees and plantings and several period accessory buildings on a large lot. The property at 65 West Dunne Avenue is a single story, wood frame residence with an irregular plan. The property also includes a detached garage at the rear and appears to be in good condition. Both properties are considered to meet the criteria under the California Register of Historical Resources (CRHR): 5S3 = appears to be individually eligible for local listing or designation. See Appendix A of the CIRCA report (July 2009) for DPR 523 forms for complete property characteristics and evaluations.

According to the project description and proposed roadway improvement plans, no heritage trees will be removed and site characteristics, such as paths and walkways will remain, and only minimal driveway removal will occur. The closest wall of the two residences is approximately 18 feet from the work area.

Potential impacts to 45 and 65 West Dunne Ave due to movement and construction

The proposed demolition and subsequent new roadway construction could unintentionally damage or alter those property characteristics that are in close proximity to proposed work. This includes the character defining features of the residences as well as site elements such as mature trees and plantings, paths and walkways. They could be damaged due to movement of construction equipment, such as backing into the resources.

Mitigation Measures to reduce potential movement and construction impacts to 45 and 65 West Dunne Ave

The following mitigation measures will minimize and avoid construction impacts to the historic character defining features due to movement of construction equipment to a less than significant level:

1. Prior to the start of construction, contractor will create a "sensitivity zone" by installing temporary protection boundary (i.e. orange fencing; flagging; or signs/notices), around the trees and any other structural elements to control heavy construction equipment while working inside this zone (for 45 and 65 W Dunne Ave). **(CUL-3.1)**

2. Document, through photography and field notes, the walls, windows, and other sensitive architectural elements of the residences (for 45 and 65 W Dunne Ave) and character defining features such as walkways, trees, and other structures for their preconstruction and post construction conditions. Should damage occur, it should be remediated to its preconstruction condition as feasible, while protecting the integrity and long-term sustainability. **(CUL-3.2)**

3.5.4. Undocumented Historic/Archaeological Resources

According to the Morgan Hill Archaeological Sensitivity Map (2000) the project site is located in an area of high prehistoric or historic archaeological sensitivity, however, there are no known prehistoric or historic archaeological sites in the immediate vicinity. The area considered to have archaeological sensitivity is a relatively small area that runs perpendicular to the roadway (approximately 550ft) where ground disturbing activities might have potential impacts (the exact location of archaeological sensitive areas are not disclosed to the public to secure the integrity of these areas from potential poachers). It is also generally a location along the roadway improvement project where the widening of the roadway and improvements are minimized.

Standard Measure

The Historical Resources Ordinance (Chapter 18.75) of the Morgan Hill Municipal Code contains the following standard measure for activities that occur within archaeologically sensitive areas. This standard shall be applied in areas of mapped archaeological sensitively while ground disturbing activities (excavation and grading activities) are taking place.

1. An archaeologist shall be present on-site to monitor all ground-disturbing activities. Where historical or archaeological artifacts are found, work in areas where remains or artifacts are found will be restricted or stopped until proper protocols are met, as described below:
   a. Work at the location of the find will halt immediately within thirty feet of the find. If an archaeologist is not present at the time of the discovery, the applicant shall contact an archaeologist for evaluation of the find to determine whether it qualifies as a unique archaeological resource as defined by this chapter;

   b. If the find is determined not to be a Unique Archaeological Resource, construction can continue. The archaeologist will prepare a brief informal memo/letter that describes and assesses the significance of the resource, including a discussion of the methods used to determine significance for the find;

   c. If the find appears significant and to qualify as a unique archaeological resource,

the archaeologist will determine if the resource can be avoided and will detail avoidance procedures in a formal memo/letter; and

d. If the resource cannot be avoided, the archaeologist shall develop within forty-eight hours an action plan to avoid or minimize impacts. The field crew shall not proceed until the action plan is approved by the community development director. The action plan shall be in conformance with California Public Resources Code 21083.2.

Undocumented human remains

This project may adversely impact undocumented human remains or unintentionally discover significant historic or archaeological materials. Section 18.75.110 of the Historical Resources Ordinance of the Morgan Hill Municipal Code contains the following standard measure to reduce potentially significant impacts on undocumented human remains or archaeological resources to less than significant level.

Standard Measure

1. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply. If human remains are discovered, it is probable they are the remains of Native Americans.

e. If human remains are encountered they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need to know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.

f. Remains should not be held by human hands. Surgical gloves should be worn if remains need to be handled.

g. Surgical mask should also be worn to prevent exposure to pathogens that may be associated with the remains.

2. In the event that known or suspected Native American remains are encountered or significant historic or archaeological materials are discovered, ground-disturbing activities shall be immediately stopped. Examples of significant historic or archaeological materials include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the exclusion zone as defined below,

4. An "exclusion zone" where unauthorized equipment and personnel are not permitted shall

be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the contractor foreman or authorized representative, or party who made the discovery and initiated these protocols, or if on-site at the time or discovery, by the monitoring archaeologist (typically twenty-five to fifty feet for single burial or archaeological find),

5. The exclusion zone shall be secured (e.g., twenty-four hour surveillance) as directed by the city or county if considered prudent to avoid further disturbances,

6. The contractor foreman or authorized representative, or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for treatment and disposition:
   i. The city of Morgan Hill Community Development Director,
   ii. The contractor's point(s) of contact,
   iii. The coroner of the county of Santa Clara (if human remains found),
   iv. The Native American Heritage Commission (NAHC) in Sacramento, and
   v. The Amah Mutsun Tribal Band,

7. The coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has twenty-four hours to notify the NAHC,

8. The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) from the Amah Mutsun Tribal Band. (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.),

9. Within twenty-hour hours of their notification by the NAHC, the MLD will be granted permission to inspect the discovery site if they so choose,

10. Within twenty-four hours of their notification by the NAHC, the MLD may recommend to the City's community development director the recommended means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses or DNA analyses recommended by the Amah Mutsun Tribal Band may be considered and carried out, and

11. If the MLD recommendation is rejected by the City of Morgan Hill the parties will attempt to mediate the disagreement with the NAHC. If mediation fails then the remains and all associated grave offerings shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.

3.5.6. Conclusion

The proposed project would not result in a significant impact to cultural resources. (Less Than Significant with Mitigation Incorporation)

3.6. Geology And Soils

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

3.6.1. Discussion

Morgan Hill is located in a seismically active part of northern California. Many faults exist in the southern San Francisco Bay Area, and some of them are capable of producing ground motions that can affect the project site. Due to the project site's proximity to a number of major earthquake faults, notably the San Andreas, Hayward, and Calaveras, it is reasonable to assume that the project site would periodically be subject to ground shaking, however, the probability of ground surface rupture at the site due to displacement along a fault is remote (Pacific Geotechnical Engineering 2008). Based on a report by Pacific Geotechnical Engineering (2008) (*Appendix D*) no mapped active faults are known to cross the site.

The project site is located in the Mt. Madonna Quadrangle (USGS) which has yet to be mapped by the California Department of Conservation for seismic hazards including earthquake-induced landslide and liquefaction hazards.[1]

The Geologic Map (City of Morgan Hill 1991) identifies the majority of the area as stable with the following designations (See Figure 3 for exact location of designations):

- Sun – Unconsolidated colluviums, valley floor alluvium, or terrace deposits on flat or nearly flat ground. May be subject to vertical displacements under seismic or aseismic conditions.
- Sbr – Level ground to gently sloping ground underlain by bedrock with several feet of the ground surface. Colluvial and alluvial cover could be subject to shallow sliding, soil creep, or settlement.
- Sx – Moderately to highly expansive alluvial or colluvial soil on flat or nearly flat ground. Subject to seasonal shrinking and swelling, soil creep, and settlement. May include localized areas of non-expansive soil; expansive soils may be present within other Ground Movement Potential categories.

A very small portion of the roadway improvements are within an area of "potentially unstable ground" (Ps designation). This area extends approximately 400ft on the northern side of the road (see Figure 3 for exact location). Ps is defined by "Relatively unstable surficial deposits or bedrock materials including landslide debris, colluviums, and weak bedrock, commonly less than about 10 feet thick on moderate to steep slopes. Subject to shallow, slow-moving landsliding and soil creep (City of Morgan Hill Geologic Map 1991).

Expansive soils shrink as the water content decreases such as (during the dry season) and swell as the water content increases (e.g. during the rainy season or by irrigation). The volume change that occurs during this shrinking and swelling process can cause cracking and damage to vehicle pavements, sidewalks, driveways, and shallow foundations (Pacific Geotechnical Engineering 2008). Based on the soil samples collected and analyzed, the surficial layer of soil in much of the proposed pavement and retaining wall areas consists of fat clay of high plasticity. This soil has a high expansion potential.

1 Earthquake-Induced Landslide and Liquefaction Maps. Official Maps of Seismic Hazard Zones, California Department of Conservation, California Geological Survey

The proposed project includes improvements consisting of widening of the roadway to improve safety and to accommodate a left turn lane, bike lanes, and curb, gutter and sidewalks. Other associated improvements such as driveway replacement, retaining walls, relocation and undergrounding of utilities, and the addition or replacement of light standards will also be completed. Grading along the roadway is proposed to have approximately 6 inch cuts and/or fills in most areas, however, there is an approximately 200ft extent with up to a 2ft vertical cut. As a result of roadway widening and the existing elevation and slope changes bordering the roadway, several retaining walls are proposed to hold and stabilize the slopes. The majority of the walls are interlocking block or retaining curb walls up to 2ft in height. There is one retaining wall starting approximately 650ft east of the Peak Ave intersection on the north side of West Dunne proposed as a "cast in place" type wall that will extend approximately 250ft (this is also the area where the 2ft vertical cut along the roadway as described above will be located). The majority of this retaining wall is 2-3ft in height, but an approximately 50ft section has a maximum height up to 9ft. While cuts and fills may remove and have some minor impacts on topsoil material, the addition of engineered retaining walls will likely have a beneficial impact on the overall slope stability and reduce the further erosion of topsoil in the project area when compared to current conditions.

3.6.2. Potential Geological Impacts

As discussed above, the project site is in a location that could be impacted by ground shaking, however, the probability of ground surface rupture at the site due to displacement along a fault is remote. The site is also located in areas where expansive soil can cause damaging affects if improvements are not properly designed.

Pacific Geotechnical Engineering (2008) completed a geotechnical investigation for the proposed improvements. Based on their findings, they believe that the proposed street improvements are feasible provided that the recommendations presented in their report are incorporated into the project design and construction. Furthermore, the improvements proposed in this project are not generally used in a manner that would expose people or structures to potential substantial adverse effects that could cause the risk of loss, injury, or death.

Standard Measure

The project has obtained a geotechnical report (Pacific Geotechnical Engineering 2008) including data regarding the nature, distribution and strength of existing soils, and conclusions and recommendations for grading criteria including the stability of slopes. The report also includes a soil classification and engineering investigation as to best methods for roadway construction and other associated improvements. The report's recommendations will be incorporated into the final construction plans.

3.6.3. Soil Erosion and Loss of Topsoil

The development of the site would cause ground disturbance of mostly top soil related to

construction activity. The ground disturbance would be limited to the areas proposed for grading including areas along the existing roadway where cuts and fills of the roadway will be utilized to smooth out elevation changes and in areas adjacent to the existing roadway where proposed widening of the roadway and improvements will occur. There are some areas bordering the existing roadway where vertical cuts up to 2ft will be required.

There will likely also be some areas for staging of materials and equipment storage while construction is on-going that if not managed and maintained properly can have cause erosion and loss of topsoil.

Standard Measure
Prior to the "Notice to Proceed", the contractor will submit a sediment and erosion control plan to the City of Morgan Hill, Public Works Department. The plan shall be acceptable and conform to City standards to prevent significant sediment and soil erosion during construction and include the standards and guidelines found in the California Stormwater Quality Association, Stormwater Best Management Practice Handbook.

3.6.4. Conclusion

Due to standard measures that will be incorporated into the project, the proposed project would not result in a significant impact to geology and soils. (Less Than Significant)

3.7. Hazards And Hazardous Materials

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous	☐	☐	☐	☒

materials, substances, or waste within one-quarter mile of an existing or proposed school?				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

3.7.1. Conclusion

The proposed project would not result in a significant impact to hazards and hazardous materials. (No Impact)

3.8. Hydrology And Water Quality

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance	☐	☐	☐	☒

Rate Map or other flood hazard delineation map?				
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

3.8.1. Hydrology and Storm Water Management

The project site is located within the Llagas Creek Drainage Basin.[2] The existing hydrologic conditions in the project area include the roadway areas of West Dunne Avenue and surrounding lands consisting of mostly residential development and undeveloped hillsides. The watershed extends to El Toro mountain in the west, Nob Hill (and other hills) in the north, West Dunne in the south, and West Little Llagas Creek in the east.

There are two main discharge points for the project area. The first discharge point is in the western watershed (originating from El Toro and various residential areas to the west) and is generally conveyed through the project area in a 36" reinforced concrete pipe (RCP) that enters from the west near the intersection of Peak Avenue/West Dunne Avenue and then continues southward in a 54" RCP. There are several storm drain inlets near this intersection. The other discharge point includes the remainder of the watershed area (a majority of the project), which is conveyed to West Little Llagas Creek through surface runoff, typically small roadside ditches with intermittent curb/gutter running along West Dunne Avenue. The creek itself crosses under West Dunne Avenue in a 9 foot by 5 foot reinforced concrete box culvert. The existing street drainage is conveyed to the creek via two curb inlets that are located directly above the box culvert. Additionally, some portions of the southern half-street section of West Dunne Avenue run along gutters or ditches and are intercepted by Barnell Avenue and Del Monte Avenue, which convey these flows via gutter flow outside the project area into the existing storm water system.

The proposed project will widen West Dunne Avenue with asphalt concrete pavement, and will include new concrete sidewalks, curbs, and gutters. A new storm drainage system will be constructed using curb inlets, flat grate inlets, manholes, and RCP. The western portion of the project will connect to the existing storm drain pipe near Peak Avenue. The eastern portion of the project will connect to the box culvert at West Little Llagas Creek.

2 The majority of the information provided in this section is based on personal communication with Joe Streeper, HMH Engineering, Project Design Consultants. August24, 2009.

The amount of additional pavement and other impervious improvements is generally negligible for purposes of overall hydrologic modifications. It is not anticipated that the improvements will have impacts to the local hydrology or flood conditions. With the addition of an underground pipe storm drain system, localized street flooding should be significantly reduced.

West Little Llagas Creek is under the jurisdiction of the Santa Clara Valley Water District (SCVWD). The proposed storm drain connection to the creek will have an equivalent peak discharge as the existing inlet connections to the creek. This is achieved through the design by routing a comparable flow to the creek in the new storm drain pipe, while the remainder of the flows are routed down Barnell Avenue and Del Monte Avenue into the existing storm water system. This distribution of flow is essentially the same as the existing conditions.

The City's standard measures below will minimize impacts to the storm drain system due to construction of the roadway improvements to less than significant levels.

Standard Measure 1
A complete storm drainage study of the proposed development must be submitted showing amount of run-off, and existing and proposed drainage structure capacities. This study shall be subject to review and approval by the Director of Public Works. All needed improvements will be made by the Contractor. No overloading of the existing system will be permitted.

Standard Measure 2
The applicant shall cause the design and construction to be undertaken for a storm drainage collection system. All storm drain improvements shall be constructed to the satisfaction of the Director of Public Works.

3.8.2. Flooding Potential

According to the Flood Insurance Rate Maps (FIRM) prepared by the U.S. Federal Emergency Management Agency (FEMA) the majority of the project is located in Zone X (areas of 0.2% annual chance flood). A portion of the roadway between Monterey Rd and Del Monte Ave is within an AE zone (1% annual flood; considered a 100-yr flood hazard zone) (see Figure 4 and 5)[3]. The proposed roadway improvements do not place structures that are subject to FEMA or the National Flood Insurance Programs (NFIP).

3.8.3. Potential Water Quality Impacts

The proposed improvements include the addition of impervious surface which could increase the amount of storm water runoff generated by the site and pollutants carried by storm water runoff (e.g. oil, brake dust, and other pollutants produced by vehicles), thereby adversely affecting water quality downstream of the project site.

3 Flood Insurance Rate Map, City of Morgan Hill, Santa Clara County, California. Federal Emergency Management Agency, May 18, 2009. Flood Insurance Rate Maps (FIRM) Panels: 06085C0606H; 06085C0607H

Construction activities associated with the proposed project would require grading, which could expose onsite soils to the erosive forces of wind and rain. Erosion of onsite soils could also adversely affect water quality.

The State Water Resources Control Board (SWRCB) is responsible for implementation of the National Pollution Discharge Elimination System (NPDES) Program. The Central Coast Regional Water Quality Control Board (RWQCB) issues and enforces NPDES permits for discharges to water-bodies in the portion of Santa Clara County that drains to the Monterey Bay. Projects disturbing one acre or more of land during construction are required to file a Notice of Intent (NOI) to be covered under the State NPDES General Construction Permit for discharges of stormwater associated with construction activities.

The State NPDES General Construction Permit requires development and implementation of Storm Water Pollution Prevention Plan (SWPPP) and uses stormwater Best Management Practices (BMPs) to control runoff, erosion, and sedimentation from the site both during and after construction. The SWPPP has two major objectives: 1) to help identify the sources of sediments and other pollutants that affect the quality of stormwater discharges; and 2) to describe and ensure the implementation of practices to reduce sediment and other pollutants in stormwater discharges.

The standard measures adopted below will minimize water quality impacts due to construction of the roadway improvements to less than significant levels.

Standard Measure 3
As required by the State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, construction activity resulting in a land disturbance of one (1) acre or more of soil, or whose projects are part of a larger common plan of development that in total disturbs more than one (1) acre, are required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 for Discharges of Storm Water Associated with Construction Activity (General Permit). To be permitted with the SWRCB under the General Permit, owners must file a complete Notice of Intent (NOI) package and develop a Storm Water Pollution Prevention Plan (SWPPP) Manual in accordance with Section A, B, and C of the General Permit prior to the commencement of soil disturbing activities. A NOI Receipt Letter assigning a Waste Discharger Identification (WDID) number to the construction site will be issued after the SWRCB receives a complete NOI package (original signed NOI application, vicinity map, and permit fee); copies of the NOI Receipt Letter and SWPPP shall be forwarded to the Public Works Department for review. The SWPPP shall be made a part of the improvement plans.

Standard Measure 4
Prior to the "Notice to Proceed", the contractor will submit a sediment and erosion control plan to the City of Morgan Hill, Public Works Department. The plan shall be acceptable and conform to City standards to prevent significant sediment and soil erosion during construction and include the standards and guidelines found in the California Stormwater Quality Association, Stormwater Best Management Practice Handbook.

3.8.2. Conclusion

Due to standard measures that will be incorporated into the project, the proposed project would not result in a significant impact to hydrology and water quality. (Less Than Significant Impacts)

3.9. Land Use And Planning

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

3.9.1. Discussion

Development along West Dunne Avenue has occurred over a long period of time. Some residences were built at the earlier stages of the City's establishment while others were built in more recent times. The West Dunne Avenue roadway itself has also evolved from a characteristically unimproved "rural" road to one of the City's major corridors. This has resulted in varying development standards applied to lands adjacent to the roadway as well as different development standards for the road itself.

The Zoning Code of Morgan Hill requires minimum development standards such as setbacks of structures to properties lines for front, side, and rear yards. These setbacks vary depending on the zoning district for which the parcel is within. The parcels listed in Table 3 maybe potentially affected by the proposed project with regards to setbacks.

Table 3. Setback areas of parcels potentially affected by proposed project

APN	Zoning	Required Setback (ft)	Current Setback (ft)	Setback of Proposed ROW (ft)
767-12-006	R2-3,500	20	11	8[1]
767-08-038	R2-3,500	20	17	13.5
767-08-036	R2-3,500	20	17.5	14
767-08-039	R2-3,500	20	17	13.5
767-08-040	R2-3,500	20	9	5.5[2]
767-11-028	RPD	15	26	13.5
767-09-001	R3	15	17	14
767-09-002	R3	15	17	14
767-12-008	R2-3,500	20	29.5	16.5

1. Could be considered a conforming side yard (5ft setback if front yard is determined to be adjacent to private driveway)

2. Measured to front porch area. Setback to residence 8ft.

Note: The information provided is based on preliminary measurements used surveyed right-of-way, aerial photos, and other means. For accuracy purposes and verification the measurements need to be field verified

The potential environmental impacts of the proposed actions to reduce the setbacks have been addressed by other sections of this document. The reduction of setbacks is not in and itself a significant environmental impact, but is a regulatory compliance issue. This initial study could be used for future regulatory actions which may be pursued to legitimize the resultant setbacks, such as front yard setback variances, minor exceptions, or overlay districts that establish a different front yard standard for all the project area or those affected parts.

Implementation of the City's standard measures included in the project and the mitigation and avoidance measures described in the individual categories of *Section 3, Evaluation of Environmental Impacts* of this initial study reduce potential environmental impacts of setback reductions to less than significant levels.

3.9.2. Conclusion

The proposed project would not result in a significant impact to land use and planning. (No Impact)

3.10. Mineral Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.10.1. Conclusion

The proposed project would not result in a significant impact to mineral resources. (No Impact)

3.11. Noise

Would the project result in:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.11.1. Discussion

Noise is defined as unwanted sound. Noise can be disturbing or annoying because of its pitch or loudness. Pitch refers to relative frequency of vibrations, higher pitch signals sound louder to people. A decibel (dB) is measured based on the relative amplitude of a sound. Ten on the decibel scale marks the lowest sound level that a healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis such that each 10 decibel increase is perceived as a doubling of loudness.

For the purposes of characterizing noise assessment for CEQA, the A-weighted sound level, or dBA, gives greater weight to sounds to which the human ear is most sensitive. Sensitivity to noise increases during the evening and at night because excessive noise interferes with the ability to sleep. Twenty-four hour descriptors have been developed that emphasize quiet-time noise events. The Day/Night Average Sound Level, Ldn, is a measure of the cumulative noise exposure in a community. It includes a 10 dB addition to noise levels from 10:00 PM to 7:00 AM to account for human sensitivity to night noise.

3.11.2. Applicable Noise Standards

The Public Health and Safety Element of the Morgan Hill General Plan establishes noise and land use compatibility standards to guide development and safeguard public health by minimizing noise impacts. Goals and policies established in the Noise section of the Public Health and Safety Element of the General Plan that are applicable to the proposed project include:

Goal 7. Prevention of noise from interfering with human activities or causing health problems.

7e. Noise level increases resulting from traffic associated with new projects shall be

considered significant if: a) the noise level increase is 5 dBA Ldn or greater, with future noise levels of less than 60 dBA Ldn, or b) the noise level increase is 3 dBA Ldn or greater, with a future noise level of 60 dBA Ldn or greater.

Goal 8. Protection from noise associated with motor vehicles and railroad activity.

8a. Roadway design, traffic signalization and other traffic planning techniques (such as limiting truck traffic in residential areas) shall be used to reduce noise caused by speed or acceleration of vehicles.

3.11.3. Noise Assessment and Potential Impacts to Permanent Noise Increases

The following information is based on an environmental noise assessment conducted by Illingworth & Rodkin, Inc. (August 2009) and can be found in *Appendix E*.

A noise monitoring survey was conducted from March 10, 2009 to March 11, 2009 to quantify the existing noise environment along the project corridor. The noise monitoring survey included two long-term measurements (LT-1 and LT-2), and five short-term measurements (ST-1 through ST-5) as indicated on Figure 1 of the noise report. The noise environment along the project site results primarily from local traffic noise generated along West Dunne Avenue and distant traffic noise from Monterey Street.

Noise measurement location LT-1 was approximately 40 feet from the center of the roadway, in the front yard of 130 West Dunne Avenue. This noise measurement represented the noise environment resulting from traffic along West Dunne Avenue. Hourly average noise levels typically ranged from 62 to 67 dBA L_{eq} during the day, and from 48 to 64 dBA L_{eq} at night. The calculated day-night average noise level at this measurement location was 66 dBA L_{dn}.

Long-term noise measurement location LT-2 documented existing ambient noise levels along West Dunne Avenue at the western portion of the project area near Peak Avenue. This noise measurement location represented the noise environment resulting from traffic along West Dunne Avenue and distant traffic along Peak Avenue. Hourly average noise levels typically ranged from 56 to 62 dBA L_{eq} during the day, and from 43 to 59 dBA L_{eq} at night. The calculated day-night average noise level at this measurement location was 61 dBA L_{dn}.

Short-term (ten minute) noise measurements were made at five additional locations within the project area to complete the noise monitoring survey. Short-term noise measurement ST-1 was made approximately 40 feet from the center of West Dunne Avenue. The average noise level during this time period was 65 dBA L_{eq}. Short-term noise measurement ST-2 was made in the backyard of 130 West Dunne Avenue. The average noise level during this time period was 48 dBA L_{eq}. Short-term noise measurement ST-3 was made approximately 65 feet from the center of West Dunne Avenue, adjacent to the medical office buildings. The average noise level during this time period was 60 dBA L_{eq}. Short-term noise measurement ST-4 was made approximately 65 feet from the center of West Dunne Avenue near Viewcrest Lane. The average noise level during this time period was 62 dBA L_{eq}. Short-term noise measurement ST-5 was made approximately 65 feet from the center of West Dunne Avenue, across from the

commercial shopping center. The average noise level during this time period was 61 dBA L_{eq}. Table 4 summarizes the results of these measurements.

TABLE 4. Summary of Short-Term Noise Measurement Data

(a) Noise Measurement Location	L_{max}	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	L_{eq}	L_{dn}
ST-1: ~40 feet from the center of West Dunne Avenue. (3/10/2009, 1:40-1:50 p.m.)	73	71	69	63	50	65	66
ST-2: Backyard of 130 West Dunne Avenue. (3/10/2009, 1:40-1:50 p.m.)	57	55	51	47	41	48	49
ST-3: ~65 feet from the center of West Dunne Avenue. (3/11/2009, 11:30-11:40 a.m.)	72	69	64	56	45	60	61
ST-4: ~65 feet from the center of West Dunne Avenue. (3/11/2009, 11:50-12:00 p.m.)	71	70	66	59	44	62	64
ST-5: ~ 65 feet from the center of West Dunne Avenue. (3/11/2009, 12:10-12:20 p.m.)	69	68	65	59	52	61	62

Note: L_{dn} approximated by correlating to corresponding period at long-term site.

The proposed project will expand the roadway width by approximately 5ft on either side of the road between Peak Ave and Del Monte Ave, and 16ft on the north side of the road and 8ft on the south side of the road between Del Monte Ave and Monterey Rd. The project would not add new travel lanes, but would shift the alignments of the existing travel lanes slightly closer to adjacent sensitive land uses.

Traffic noise modeling was conducted to calculate the change in noise levels expected as a result of the shift in lane geometries. The traffic noise model was calibrated to measured conditions documented during the noise monitoring survey, and then used to calculate traffic noise levels under the existing, future no project (assumes lane geometries remain unchanged) and future with project scenarios. The "future" was defined as Year 2030 with development under the existing General Plan land uses. This future with project scenario would represent credible worst-case traffic noise levels emanating from the roadway. The results of the modeling are summarized in Table 5.

TABLE 5. Summary of Traffic Noise Modeling Results (dBA, L_{dn})

Receiver	Existing	2030 No Project	No Project Increase Over Existing	2030 With Project	With Project Increase Over Existing
ST-1	66	67	1	67	1
ST-2	49	50	1	50	1
ST-3	61	62	1	62	1
ST-4	64	65	1	66	2
ST-5	62	63	1	64	2

The Morgan Hill General Plan "Future Noise Contours Map" shows most of the area along West Dunne Ave at a level of 60 or 65 dBA for the Projected 2025 noise contour. According to significance criteria established for the project, the impact would be considered significant if the project increases noise levels by 3 dBA L_{dn} or more where noise levels would exceed 60 dBA L_{dn}. The 2030 No Project traffic noise levels are anticipated to increase by about 1 dBA L_{dn} as a result of increased traffic anticipated along West Dunne Avenue (using the *Travel Demand Forecasting Model &Future Improvements Study* completed by Fehr & Peers 2009). This traffic noise level increase is expected with or without the project. Peak hour traffic volume is considered to be the same with or without the project since the number of travel lanes is staying the same and it is assumed that the project itself will not contribute additional peak hour trips. A comparison of the 2030 No Project and 2030 With Project modeling results indicates that the relative changes made to the lane geometries would result in an additional slight increase in traffic noise levels at existing residences located north and south of West Dunne Avenue. The noise increase resulting from the shift in lane geometries would range from 0 to 1 dBA L_{dn} at receivers along the project corridor.

As a result of future noise levels due to increased traffic along West Dunne Ave and noise increases due to shift in lane geometries with the project, there would be an increase of 1 to 2 dBA L_{dn} higher than existing conditions. The projected noise level increase would not be perceptible and the impact would be less-than-significant.

3.11.4. Construction Noise Assessment and Potential Impacts

The construction of the project would generate noise, and would temporarily increase noise levels at adjacent residential receptors. Construction equipment would likely include backhoes, excavators, dump trucks, front-end loaders, asphalt pavement grinders, compacting equipment, asphalt pavers, concrete trucks and various passenger vehicles. Noise impacts resulting from roadway construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors. Construction activities generate considerable amounts of noise, especially when heavy equipment is used. The highest maximum

noise levels generated by project construction would typically range from about 90 to 98 dBA at a distance of 50 feet from the noise source. Typical hourly average construction generated noise levels are about 79 dBA to 88 dBA measured at a distance of 50 feet from the center of the site during busy construction periods. Construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor.

Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, and nighttime hours), the construction occurs immediately adjacent to noise sensitive land uses (e.g., residential uses), or when construction durations last over extended periods of time. Construction of the planned roadway improvements would result in temporary noise level increases at sensitive receivers along the alignment of those improvements. Based on information provided by Illingworth & Rodkin (2009), prolonged interference is defined as a noise level increase that occurs for more than one year. The construction of the roadway improvements would not be expected to generate noise levels exceeding 60 dBA L_{eq} and the ambient noise environment by 5 dBA L_{eq} or more at a particular receiver for a period exceeding one year, however, construction activities can cause an impact if the noise producing activities occur during noise-sensitive times of the day (e.g. early morning, evening, and nighttime hours).

Under the Morgan Hill Municipal Code, the allowed hours of construction are controlled to avoid substantial impacts to sensitive receptors, however, the Code specifically exempts construction noise resulting from Public Works projects.

Mitigation Measures to Reduce Construction Noise Impacts

In order to reduce the construction noise impact to a less than significant level, the following mitigation measure is recommended:

Mitigation Measure
Construction activities shall be limited to the hours between 7:00 AM and 8:00 PM, Monday through Friday, and between the hours of 9:00 AM and 6:00 PM on Saturdays. No construction activities should occur on Sundays or federal holidays. In the event that construction activities are scheduled to occur outside of the defined time schedules, a minimum of 72 hour notice will be sent to all property owners directly affected by the construction activities. **(NOI-1)**

3.11.5. Groundborne Vibration Assessment and Potential Impacts

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. In describing vibration in the ground and in structures, the motion of a particle (i.e. a point in or on the ground or structure) is used. Vibratory motion is commonly described by identifying the peak particle velocity (PPV). Vertical components of transportation and construction generated vibrations are generally the strongest and peak particle velocity in the vertical direction correlates best with damage to structures and complaints of annoyances of earthborne vibration.

The project includes the following improvements along the roadway in various intensities and locations: roadway widening and striping; pedestrian access with sidewalks on both sides of the road including curb and gutter; a two way left turn lane; bike lanes in both directions; streetlights; storm drainage; signage; landscaping; relocation of utilities; and undergrounding of a substantial amount of overhead electric utilities. Construction equipment anticipated during proposed construction activities would include backhoes, excavators, dump trucks, front-end loaders, asphalt pavement grinders, compacting equipment, asphalt pavers, concrete trucks and various passenger vehicles. Construction activities with the greatest potential of generating perceptible vibration levels would include the removal of pavement and soil, the movement of heavy tracked equipment, and vibratory compacting of roadway base materials.

Impacts to Sensitive Structures

Illingworth & Rodkin (2009) (*Appendix E*) reviewed the anticipated construction equipment and the potential vibration level attributed to the equipment based on data provided in other studies. Vibration levels generated by proposed activities and equipment would be equal to or below the 0.2 in/sec PPV when construction occurs at distances of 25 feet or greater from sensitive structures. There has been some evidence that construction activities occurring within 25 feet of sensitive historic structures could generate vibration levels exceeding 0.2. in/sec and result in "architectural" damage. The construction of the project may at times require heavy equipment or impact tools within 25 feet of sensitive historic structures and the impact would be considered significant.

Mitigation Measures to Reduce the Vibration Impacts to Sensitive Structures

The Mitigation Measures found in the Cultural Resources section (3.5.2. 155 West Dunne Ave: Potential Impacts and Mitigation Measures) apply to this section as well and incorporation of those measures will reduce vibration impacts to sensitive structures to a less than significant level.

1. Identify feasible alternatives to the use of heavy construction equipment for demolition and construction within 25 feet of the pillars and retaining walls such as saw cut and removal of concrete (instead of jack-hammering) and slurry fill (for backfill material to eliminate/reduce required compaction for regular backfill material). **(NOI-2.1)**

2. Field monitor vibration levels while ground-disturbing construction is occurring within 25 feet of the pillars and retaining walls. Establish a vibration threshold of 0.2 in/sec. If levels of vibration exceed the threshold, alternative construction methods identified in Mitigation #1 would need to be implemented within a 25-foot distance of the pillars and retaining walls or minimum distance determined in the field to reduce vibration levels under the established threshold. **(NOI-2.2)**

3. Document, through photography and field notes, the stone pillars and retaining walls for their preconstruction and post construction conditions. Should damage occur, the stone pillars and retaining walls should be remediated to their preconstruction condition as feasible, while protecting the integrity and long-term sustainability of the structures. **(NOI-2.3)**

Human Exposure to Groundbourne Vibration

There is no established standard or guideline for human exposure to groundbourne vibration, however, there have been many studies to characterize when vibration levels exceed those levels regarded as annoyances. Based on information reported in a Caltrans (2002) study and as reported by Illingworth & Rodkin (2009), a threshold value of 0.2 in/sec PPV has been established for human exposure to groundbourne vibration. It is important to note that where human reactions are concerned, the value is at the point at which the person is situated and can be affected by the structure of the building they are in and can also be affected by the level of activity of the person while the vibration activity is occurring (i.e. a person moving will not recognize the vibration as a person at rest).

Based on the known information about the construction methods that will likely be used, vibration levels generated by construction activities would be perceptible indoors and may be considered annoying at times. However, residential land uses adjoining the roadway would not likely be subject to excessive vibration levels over extended periods of time given the limited work anticipated in close proximity to existing residential buildings. Furthermore, proposed construction hours are during the daytime only thus reducing the potential for residential annoyance during typical periods of rest or sleep.

3.11.6. Conclusion

The proposed project would not result in a significant impact from noise or groundbourne vibration. (Less Than Significant with Mitigation Incorporation)

3.12. Population And Housing

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.12.1. Discussion

The Circulation Element in the Morgan Hill General Plan designates West Dunne Ave as a major East-West arterial roadway. While the Circulation Element is intended to accommodate future growth through 2025 in Morgan Hill, residential growth in Morgan Hill is ultimately controlled by the Residential Development Control System (RDCS). By approving Measure C in 2004, Morgan Hill voters extended the City's RDCS to 2020. The General Plan assumes that some form of residential growth control and the current allowed rate of approximately 220 new units per year will continue until 2020, with the end result being a city population of 42,950. For this reason, population growth over the planning period will be consistent with the assumptions in the City of Morgan Hill General Plan and the planned roadway improvements will not be a significant factor in inducing population growth within the City of Morgan Hill.

The project consists of safety and other roadway improvements to an existing 2-lane roadway, as well as addition of bike lanes, sidewalks, and left turn lanes. It does not include the extension of a new roadway or infrastructure that will induce substantial population growth, therefore, the potential impacts are less than significant.

3.12.2. Conclusion

The proposed project would not result in a significant impact to population and housing. (Less Than Significant Impacts)

3.13. Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒

Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

3.13.1. Conclusion

The proposed project would not result in a significant impact to public services. (No Impact)

3.14. Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.14.1. Conclusion

The proposed project would not result in a significant impact to recreation. (No Impact)

3.15. Transportation/Traffic

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

3.15.1. Ciculation and Traffic Setting

The proposed project consists of improvements to an existing 2-lane roadway. As previously discussed, in the existing 2001 General Plan Circulation Element, West Dunne Avenue is identified as a future (by Year 2025) 4-lane arterial from the Santa Teresa Corridor to Gallop Drive. The currently proposed improvements to West Dunne Avenue do not preclude further improvements to achieve a 4-lane standard, however it should be recognized that the City of Morgan Hill has recently completed a new transportation demand model based upon projected Year 2030 conditions, which has been used to prepare a proposed Circulation Element Update. The analysis has determined that Dunne Avenue between Hale Avenue/Santa Teresa and Del Monte Avenue would be reduced from a planned 4-lane arterial to a 2-lane arterial with a two-way left turn lane. This recommended change has been incorporated into the proposed General Plan Circulation Element Amendment, which is evaluated in a Draft Environmental Impact Report (2009) that is currently in circulation for a 45-day public comment period. Decisions about the future planned width for West Dunne Avenue will be made under the Circulation Element Amendment process.

If the recommended changes for the planned West Dunne Avenue configuration are approved, then the currently proposed improvements will represent the full implementation of planned improvements to West Dunne in the segment west of Del Monte Avenue. The currently

proposed improvements retain the existing 2-lane configuration east of Del Monte Avenue, however the project as designed would allow for removal of on-street parking and re-striping the right of way at the appropriate time in the future, to accommodate the recommended 4-lane configuration by Year 2030, with bike lanes and sidewalks, in the West Dunne segment between Monterey and Del Monte Avenues.

The proposed project will not itself increase traffic in relation to the existing traffic load, and the project area does not include any designated Congestion Management Agency (CMP) segments or intersections. The proposed project enhances pedestrian and bicycle modes of transportation. Although the project does not involve increases in traffic, the Level of Service information from the above-referenced transportation analyses is presented below for informational purposes:

TABLE 6. Existing (2007 Base Year)

Segment	Intersection	Type	LOS
West Dunne Ave between Peak Ave & Viewcrest Ln		2-lane undivided arterial	LOS C
	West Dunne & Peak Ave	All-way Stop	LOS A in both AM & PM Peak Hours
	West Dunne & Hale Ave	Not an Existing Intersection	Future Intersection
	West Dunne & Del Monte	Side-Street Stop	LOS B in both AM & PM Peak Hours
	Dunne Ave & Monterey Ave	Signal	LOS C in AM Peak & LOS D+ in PM Peak

TABLE 7. Future Conditions under Current General Plan (Year 2030) – Current Planned Circulation Network and Land Uses under Current General Plan

Segment	Intersection	Type	LOS
West Dunne Ave between Peak Ave & Viewcrest Ln		Planned 4-lane undivided arterial	LOS C
	West Dunne & Peak Ave	All-way Stop	LOS B in both AM & PM Peak Hours
	West Dunne & Hale Ave	Future All-way Stop	LOS C in AM Peak & LOS B in PM Peak
	West Dunne & Del Monte	Side-Street Stop	LOS C in both AM & PM Peak Hours
	Dunne Ave & Monterey Ave	Signal	LOS C in AM Peak & LOS D+ in PM Peak

TABLE 8. Future Conditions under "Model" General Plan (Year 2030) – Model-Recommended Circulation Network and Land Uses under Current General Plan

Segment	Intersection	Type	LOS
West Dunne Ave between Peak Ave & Viewcrest Ln		Planned 2-lane undivided arterial	LOS C
	West Dunne & Peak Ave	All-way Stop	LOS B in both AM & PM Peak Hours
	West Dunne & Hale Ave	Future Signal	LOS C in both AM & PM Peak Hours
	West Dunne & Del Monte	Side-Street Stop	LOS C in AM Peak & LOS D in PM Peak
	Dunne Ave & Monterey Ave	Signal	LOS C in AM Peak & LOS D+ in PM Peak

Table 9. Future Conditions under "Cumulative" General Plan Amendments (Year 2030) – Model-Recommended and Additional Circulation Network Changes, and all proposed General Plan Land Use Amendments

West Dunne Ave between Peak Ave & Viewcrest Ln		Planned 2-lane undivided arterial	LOS D
	West Dunne & Peak Ave	All-way Stop	LOS B in both AM & PM Peak Hours
	West Dunne & Hale Ave	Future Signal	LOS C in both AM & PM Peak Hours
	West Dunne & Del Monte	Side-Street Stop *	LOS E in AM Peak* & LOS F in PM Peak*
	Dunne Ave & Monterey Ave	Signal	LOS C in AM Peak & LOS D** in PM Peak

* Implementation of the recommended Mitigation Measure to signalize this intersection would improve LOS to C in the AM Peak and C+ in the PM Peak

** Implementation of the recommended Mitigation Measure to keep Monterey 4 lanes between Dunne and Fifth would improve LOS to D+ in the PM Peak

As previously stated, the currently proposed West Dunne improvement project does not create any Level of Service impacts, and the project does not preclude implementation of either the current General Plan which calls for a future 4-lane width of West Dunne, or the currently proposed Circulation Element modification which would retain a 2-lane configuration west of Del Monte, and would provide for 4 lanes between Del Monte and Monterey, with a traffic signal at Dunne/Del Monte, with such lane and signal improvements to occur when warranted in the future.

3.15.2. On-street Parking

Existing parking along West Dunne Ave varies depending on the extent of roadway, roadway width, and level of improvements. Some areas are void of parking because of unimproved

shoulders and minimized paved width within the public right-of-way adjacent to the travel lane. Along other stretches of the roadway where there are sufficient paved areas between the travel lane and edge of right-of-way, parallel parking is allowed. Other areas along the roadway consist of segments of either paved or unpaved areas where the edge of the existing right-of-way is considerably wider and further setback to the travel lane and has resulted in perpendicular parking to the roadway. Although there is currently enough depth to park a vehicle in this manner, it can pose a safety concern because of potential accidents while backing up into oncoming traffic.

The City of Morgan Hill's Municipal Code (Chapter 18.50) requires off-street parking to satisfy parking demands of all land uses (except for certain projects located in the downtown area). Off-street parking for single family dwellings includes at a minimum, two covered spaces plus two additional driveway spaces. Multi-family dwellings require 1.5 to 2.5 spaces per unit (depending on unit size). In addition to these standards, all residential development requires guest parking (1 space for each 3 dwelling units for multi-family; 1 space for each 4 dwelling units for single-family) which can be provided conveniently off-street or may be located on- street, however, should not be more than 150 feet from the residences they are intended to serve. Parking ratios for commercial parking lots depend on the type of use, however, existing commercial lots along West Dunne Ave are sufficient and will not be reduced due to the proposed project.

The City of Morgan Hill Design Standards and Standard Details for Construction (June 2007) does not require on-street parking along an arterial roadway, however, on-street parking along the roadway can be provided when adequate roadway width exists and safety is maintained.

The planned improvements for West Dunne Ave allows for on-street parking where these criteria exist. Some planned areas of the roadway will reduce the available on-street parking as compared to the areas that currently exist for on-street parking. Approximately 4 spaces will be eliminated on the north side where Viewcrest Ln (private street) intersects with West Dunne Ave and approximately 3 spaces will be removed on the north side just west of the Del Monte Ave intersection. Some further parking will be lost through the addition of bicycle lanes, sidewalk improvements, and two-way left turn lanes, which will reduce the current depth from the travel lane to the boundary of the public right-of-way, thus eliminating perpendicular parking that occurs on the south side of West Dunne Ave. However parallel parking will be allowed and will provide for improved safety for motorists and bicyclists and a more uniform parking along the extent of the roadway (i.e. parallel parking).

Areas along the south side of West Dunne Ave will gain some on-street parking where parking currently doesn't exist. Additional on-street parking was considered in preliminary designs of West Dunne Ave, however, to reduce and avoid other environmental impacts such as impacts to trees and potentially significant historical resources, on-street parking has been modified to the current design.

As described above, the proposed roadway improvement project will eliminate some on-street

parking, however, will provide for additional parking in other areas. The end result is a negligible difference in the number of current parking spaces available as compared to the proposed number of parking spaces within the project area. This difference does not result in a significant impact to the parking capacity in the vicinity of those residences or businesses that may be affected by the proposed project.

3.15.3. Conclusion

The proposed project would not result in a significant impact to transportation and traffic. (Less Than Significant Impact)

3.16. Utilities And Service Systems

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

3.16.1. Discussion

The City of Morgan Hill's storm drainage system consists of a combination of curb and gutter facilities, curb inlets, underground pipelines, and bubblers that drain to the nearest creek or to manmade natural detention basins. The City's Storm Drainage System Master Plan (2002) evaluated the existing system and determined that the current and proposed design capacities accommodates 100-year design storms for the build-out land use conditions, as established in the City's General Plan. The Storm Drainage Master Plan proposes enhancements to the existing storm drainage in anticipation of future growth and is implemented through the City's Capital Improvement Program.

3.16.2. Potential Impacts Due to Storm Drainage Improvements

The proposed project will widen West Dunne Avenue with asphalt concrete pavement, and will include new concrete sidewalks, curbs, and gutters. A new storm drainage system will be constructed using curb inlets, flat grate inlets, manholes, and reinforced concrete pipe. The western portion of the project will connect to the existing storm drain pipe near Peak Avenue. The eastern portion of the project will connect to the box culvert at West Little Llagas Creek.

West Little Llagas Creek is under the jurisdiction of the Santa Clara Valley Water District (SCVWD). The proposed storm drain connection to the creek will have an equivalent peak discharge as the existing inlet connections to the creek. This is achieved through the design by routing a comparable flow to the creek in the new storm drain pipe, while the remainder of the flows is routed down Barnell Avenue and Del Monte Avenue into the existing storm water system. This distribution of flow is essentially the same as the existing conditions.

The proposed enhancements to the existing storm drainage are contained within the extent of the proposed right-of-way and other improvements planned for West Dunne Avenue. Environmental impacts due to the planned storm drainage improvements have been considered as part of the overall project design and have been minimized or avoided as feasible. Potentially significant environmental impacts addressed throughout the document for improvements to West Dunne Avenue apply to the storm drainage enhancements. The standard measures and mitigation measures identified in the applicable sections of this document sufficiently mitigate the potential environmental impacts to less than significant levels.

3.15.4. Conclusion

The proposed project would not result in a significant impact to utilities and service systems. (Less Than Significant Impact)

3.17. Mandatory Findings Of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

3.18. Discussion

The proposed project would not result in significant environmental impacts with the implementation of the City's standard measures included in the project and the mitigation measures described in the individual categories of *Section 3, Evaluation of Environmental Impacts* of this Initial Study. By incorporating the mitigation and avoidance measures, the proposed West Dunne Ave Improvements would not result in significant environmental impacts.

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